doi: 10.1111/hex.12216

Physicians' perceptions of shared decision-making behaviours: a qualitative study demonstrating the continued chasm between aspirations and clinical practice

Rachel Zeuner BA,* Dominick L. Frosch PhD,†‡§ Marie D. Kuzemchak* and Mary C. Politi PhD*

*Research Assistant, Division of Public Health Sciences, Department of Surgery, Washington University in St. Louis School of Medicine, St. Louis, MO, †Fellow, Patient Care Program, Gordon and Betty Moore Foundation, Palo Alto, ‡Associate Investigator, Department of Medicine, University of California, Los Angeles and §Adjunct Associate Professor, Palo Alto Medical Foundation Research Institute, Palo Alto, CA, USA

Correspondence
Mary C. Politi PhD
Assistant Professor
Division of Public Health Sciences
Department of Surgery
Washington University in St. Louis
School of Medicine
660 South Euclid Avenue
Campus Box 8100
St. Louis
MO 63112
USA
E-mail: mpoliti@wustl.edu

Accepted for publication
12 May 2014

Keywords: patient preferences, patient-centred care, patient–clinician communication, shared decision making

Abstract

Background Shared Decision Making (SDM) is a process of engaging patients in health decisions that involve multiple medically appropriate treatment options. Despite growing public and policy support for patient engagement in health decisions, SDM is not widely practiced in clinical settings.

Objective The purpose of our study was to explore clinicians' attitudes, beliefs and perceived social norms about engaging in SDM behaviours.

Design Semi-structured qualitative interviews were conducted with physicians in five practice areas.

Setting and participants This study was conducted at an academic medical centre in St. Louis, MO. The final sample included 20 physicians: five surgeons, five OB/GYNs, four medical oncologists, five internists and one emergency medicine physician.

Results Clinicians described a number of beliefs and cultural- and system-level obstacles to the widespread implementation of SDM, such as how to engage in discussions of cost, uncertainty and clinical equipoise and how to engage patients across various socioeconomic backgrounds.

Conclusion Although a large number of participants expressed general support for incorporating SDM into practice, most held fundamentally inconsistent beliefs about practicing specific SDM behaviours. More extensive training of physicians at all levels (pre- and post-licensure) can help increase clinicians' confidence in SDM skills. Developing methods of integrating SDM into the institutional framework of hospitals and training programmes could also increase clinicians' motivation to practice SDM and work to change the culture of medicine such that SDM behaviours are supported.

Introduction

Shared decision making (SDM) is a process of engaging patients in health decisions with multiple medically appropriate treatment options. During SDM, clinicians and patients share information about the decision, discuss patients' preferences for different available options and collaborate to reach a decision.[1–4] The majority of patients desire some involvement in their health decisions.[5–12] Even when patients prefer that clinicians make the final decision, nearly all patients want to be provided with accurate information about treatment options and asked about their preferences.[5,10,13–15]

Despite growing public and policy support for SDM,[16–18] it is not widely practiced in clinical settings.[1,3,19–22] Several factors can create barriers to SDM for patients and clinicians. From the patient's perspective, patients with lower self-efficacy for engaging in decisions might be hesitant to take an active role in making choices about their care.[2,10] Furthermore, patients might not expect to be given options and might not have a mental model for engaging in SDM.[7,23,24] Many patients fear being labelled "difficult" by their clinician if they disagree with a clinician's recommendation, worrying that this could lead to lower quality care.[23,25]

Clinicians can alleviate these fears and support patients through SDM through patient-centred communication strategies.[24,26] Providing patients with information in understandable ways, including through decision support interventions, can increase patients' willingness and confidence engaging in decisions.[27] However, many clinicians cite barriers to SDM such as lack of time to engage patients in a potentially lengthy discussion about multiple treatment options and lack of SDM training.[19] In addition, although SDM is not appropriate in all circumstances, clinicians often assume that patients prefer not to be involved, without asking them. Yet these assumptions are not always accurate reflections of patients' preferences.[5,28–30] Evidence suggests that patient characteristics are not strong predictors of decision role preferences,[5–7,28] and many patients report that they wanted more involvement in their health decisions than they received.[6,7,29]

Patients often feel that clinicians lead and control clinical encounters.[23] Because many patients want to be engaged in choices about their care but are often unsure how it is important that clinicians support this approach in order for SDM to occur.[23,25,26] Although some past studies have examined physicians' barriers and facilitators to adopting SDM,[8,19–22] few studies have focused on clinicians' perceptions of specific communication behaviours necessary for SDM and predictors of those. Our study aimed to explore clinicians' attitudes, beliefs and perceived social norms about SDM communication behaviours through semi-structured, qualitative interviews with physicians in five practice areas: obstetrics and gynaecology, internal medicine, emergency medicine, medical oncology and surgery.

Methods

Theoretical orientation

Our qualitative interview guide drew on Fishbein's Integrative Model of Behaviour Prediction.[31–33] This theory is based on several widely used models of behaviour change: the Theory of Reasoned Action,[34] the Theory of Planned Behaviour,[35] the Health Belief Model[36] and Social Cognitive Theory.[37] The theory posits that behaviour is a product of attitudes, perceived social norms and self-efficacy related to the behaviour. Our semi-structured qualitative interview guide explored physicians' beliefs underlying attitudes, perceived social norms and self-efficacy for engaging in key SDM communication behaviours.[31–33] The questions for our interviews were derived from this theory and from previous studies that used this theory to guide qualitative exploratory studies about SDM.[23]

Participants and recruitment

We recruited clinicians affiliated with an academic medical centre in St. Louis, MO, USA.

Semi-structured qualitative interviews took place between October 2012 and April 2013. The study was approved by the Washington University Human Subjects Research Protection Office.

Our goal was to recruit physicians across different practice areas to ensure diversity in clinical experiences. Clinicians were approached via email to Department and Division leaders to invite them to participate in a research study aiming to better understand how they talk to their patients about health decisions with more than one option available and no clear best choice. Details about the study and how to schedule an interview were included in the email. We recruited resident physicians as well as more senior practicing physicians and encouraged those contacted to forward the email and refer colleagues. Once the physicians indicated interest, one of two trained interviewers (RZ or MP) arranged a time to conduct informed consent and complete the interviews. Recruitment ceased once we reached thematic saturation and no new themes were emerging from the interviews.

Twenty-two physicians were approached; one declined participation and one was unable to participate due to scheduling (91% response rate). The final sample included 20 physicians: five surgeons, five OB/GYNs, four medical oncologists, five internists and one emergency medicine physician. Table 1 shows the demographic characteristics of participants.

Table 1 Demographic characteristics of study sample (n = 20)

Characteristic	Number (%)
Sex	
Male	7 (35)
Female	13 (65)
Years in practice	
0–2	2 (10)
3–5	10 (50)
6–10	7 (35)
>10	1 (5)
Practice area	
Internal medicine	5 (25)
Emergency medicine	1 (5)
Medical oncology	4 (20)
OB/GYN	5 (25)
Surgery	5 (25)
Knowledge of SDM	
Heard of SDM	19 (95)
Full understanding of SDM	6 (30)

We collected limited demographic information so as not to reveal identifying information about participants.

Interviews

All interviews were conducted by two members of the research team (RZ and MP) who were trained in qualitative interviewing methods. Quality control was conducted to ensure interviews were similar across interviewers. We first conducted training and practice interviews, which we audio recorded and discussed to identify areas requiring additional probing beyond the questions listed in the guide. We then began conducting interviews, reviewing audio recordings after the first five completed to discuss procedures and the interview guide.

The goal of the interview was to elicit physicians' underlying beliefs about attitudes, perceived social norms and self-efficacy to engage in four key SDM communication behaviours: (i) acknowledging a decision to a patient, (ii) describing potential benefits, potential risks and cost of options, (iii) eliciting patients' values and preferences and (iv) responding to a patient who disagreed with a recommendation. We selected these behaviours because they have been previously identified as key components to engaging in SDM[3,26] and because many have been identified as challenging for physicians.[20,23,38]

Initially, participants were asked whether they had heard about SDM and were invited to provide general reactions. Next, they were given a definition of SDM, an example of a situation in which SDM might be appropriate in their specialty area, and an example of a decision support intervention. We defined SDM as follows:

> Shared decision making is a model of collaboration between patients and their clinicians to reach an agreement about a health decision involving multiple medically appropriate treatment options. Oftentimes, there is no clear 'best'

> option for a patient's health condition. Instead, it has been argued that the choice depends on how the patient values the possible outcomes for different options.

See Appendix S1 for the complete Interview Guide. The purpose of this was to give participants context and frame the conversation around the example. We then asked them to consider advantages and disadvantages of SDM behaviours to identify beliefs underlying attitudes about SDM, questions about who might approve or disapprove of them engaging in SDM to elicit beliefs underlying perceived social norms and questions about circumstances that might make it difficult to engage in SDM to elicit beliefs underlying self-efficacy.

Participants led the discussion, so topics of particular salience to them were explored in greatest detail. However, the interviewer ensured coverage of all topic areas. Interviewers probed participants with follow-up questions to clarify a response or gather more information using standard qualitative interviewing techniques.[39] Interviews ranged from 20 to 40 min. Participants completed a short questionnaire about demographics, practice area and years in practice. Participants were given a $10 gift card for remuneration.

Data analysis

The audio-recorded interviews were transcribed verbatim. Members of the project team reviewed the transcripts and developed a preliminary codebook. Research team members then coded five transcripts and discussed revisions to the codebook for the next coding stage. Categories and subcategories within and across interviews were identified. These were categorized into overarching themes based on both the frequency and emotive force conveyed by the participants when discussing responses to the interview questions.

All transcripts were then coded by at least two research staff using the refined codebook. To reach consensus, coders discussed inconsistent codes. If consensus could not be reached, a third team member was consulted. Through this systematic thematic analysis process,[39] we were able to identify themes and dominant trends across interviews. We used these overall themes to organize the presentation of our results. The quotes included in the results were selected because they represented the overall meaning of participants' statements.

Results

General support for SDM amongst participants and institutional leaders

Most participants expressed overall support for SDM and a shift in the culture of medicine to support these patient engagement strategies. This was expressed especially amongst those who have received informal or formal SDM, communication skills and/or patient-centred care training. As one internist described:

> . . .there has been a shift in the culture of medicine I believe to engage the patient more in decision making. (Internal Medicine, Female, 6–10 years in practice)

Another clinician explained:

> We are taught from a very early stage to include the patient in all decision making processes to protect their autonomy. (Internal Medicine, Male, 3–5 years in practice)

This idea was echoed by a surgeon who explained that she had learned specific SDM goals through formal coursework. She expressed the need to give patients the tools to engage in their health decisions:

> . . .[my role is] communicating in a language they will understand and going into as much depth as they're willing. . .involving them in their care helps them to make a decision they feel is most appropriate for them and their lifestyle. . .I'm there to provide information about the best available evidence. . .to engage them in a discussion so they know what to expect, they know they trade-offs, they can participate in the decision. (Surgery, female, 6–10 years in practice)

Clinicians generally felt that their mentors and supervisors would approve of them engag-

ing in SDM with patients. As one surgeon explained,

> In my surgery training, there would be certainly approval from my attendings [and that is helpful]. (Surgery, Male, 6–10 years in practice)

Similarly, an emergency medicine clinician suggested that most approve of acknowledging decisions to patients, that is discussing multiple options with the patient and facilitating the decision-making process though effective communication:

> I would, I would say nowadays that way we teach communication skills with our medical students and residents and in medical education...the vast majority would approve that that's the best course of action to do it that way [to acknowledge decisions to patients]. (Emergency Medicine, Male, > 10 years in practice)

Fears about being perceived as incompetent when discussing equipoise

Although there was overall support for SDM, participants expressed a difference between supporting SDM in theory and actually practicing it. Many participants expressed discomfort with specific components of SDM even when they supported the idea of patient engagement overall. For example, many physicians were concerned about explaining the concept of equipoise to patients, fearing that patients would interpret this as a sign of physicians' incompetence and not as indicative of the state of the scientific evidence. This was a larger concern amongst newer physicians. As one OB/GYN summarized:

> ... maybe they think that I don't know what to do, and I am asking them...sometimes I think the disadvantage is that the patient may lose some confidence in you... (OB/GYN, Female, 3–5 years in practice)

Similarly, one internist noted:

> [I worry that] sometimes maybe it may be viewed as incompetency rather than the correct thing to say to a patient. (Internal Medicine, Female, 3–5 years in practice)

Physician biases when engaging in SDM with particular patients

Many physicians suggested that it was more challenging to engage in SDM with particular patients. For example, they felt that patients with less education might feel overwhelmed by engaging in SDM. One physician noted:

> I think that sometimes when you feel like their education is limited, their education background is limited, sometimes I feel like if we lay all the options out there sometimes it confuses them and they are not really making a good decision in the end. (Medical Oncology, Female, 6–10 years in practice)

Another felt that these patients might prefer more paternalistic models of care:

> ...particularly in, in situations when patients don't have a very high education level they sort of rely on their doctor to sort of tell them what is the best option and they sort of just default to that. (OB/GYN, Female, 6–10 years in practice)

Similarly, another commented that:

> Patients who... maybe have less schooling, less understanding of uh their own body or their own health care issues are more accepting of being kind of told what to do... (OB/GYN, Male, 3–5 years in practice)

When prompted to describe how they know if a patient is educated enough to engage in SDM, some mentioned whether or not patients come prepared with questions or outside information, as described by this clinician:

> ...if it seems like they have had a pretty good level of understanding, they read up or they seem educated on the situation, it's easier to discuss options with them. (Medical Oncology, Female, 6–10 years in practice)

Trainees' concerns about practicing SDM with less supportive mentors

Concerns about how to engage in SDM could stem from difficulty practicing SDM behaviours whilst in training. Despite the feeling amongst many that the culture is shifting towards

supporting SDM, some participants said they were reluctant to engage in SDM when they worked under the supervision of a more experienced physician who did not accept the SDM approach. One OB/GYN described that:

> . . . [some] older physicians tend to come from a school of thought where you have to have, where you need to be paternalistic when talking to your patients and guide them to the decision. . .some colleagues would say you need to present what option you think is truly best. (OB/GYN, female, 3–5 years in practice)

Many newer physicians thus felt that SDM was challenging to practice when they had senior mentors who did not support or understand this model, as one clinician explained:

> You get used to people's practice style and respect that it's their clinic. So you are going to practice under their style as much as possible [whilst in training]. (Medical Oncology, Female, 6–10 years in practice)

Dealing with disagreements during SDM

Several physicians described discomfort when a patient disagrees with a recommendation and described difficulty balancing disagreements with the decision-making process. Some physicians felt that disagreements resulted from their shortcomings describing options. As one OB/GYN noted when describing the process of a patient disagreeing with her:

> Maybe I didn't explain myself clearly and she may not have understood why I thought that would be the best option for her. . . the bottom line is that there is a breakdown in communication. (OB/GYN, Female, 3–5 years in practice)

Others (even those who felt they supported SDM) mentioned feeling as if patients are challenging their knowledge and training by disagreeing. This belief often represented a failure to recognize that preference-sensitive decisions have more than one reasonable option. One internist noted:

> Uh if a patient disagrees, there's always that initial sense of like 'Oh wow.' You know it's like, 'Why did you disagree with me? . . .I have been training this long and my opinion should be, you know, technically should be correct. (Internal Medicine, Male, 0–2 years in practice)

Similarly, some participants felt disagreements during SDM could stem from patients' inexperience, including this surgeon who expressed:

> . . . [I would be] wondering if they understand the significant complications that would lead me to make a recommendation. . .wondering if they understand what I'm saying, wondering if they are just fixated on something that is not realistic. . . (Surgery, Female, 3–5 years in practice)

An internist similarly felt that limited education could lead patients to disagree with their clinicians:

> [I would think] that they have some sort of bias or some sort of [lack of] education that would make them go against what you think and I would certainly question that and try to get to the bottom of why they are thinking that way. (Internal Medicine, Female, 3–5 years in practice)

A few clinicians were more comfortable with patients disagreeing with them and recognized the SDM principle that patient preferences are essential to successful treatment planning. One internist described:

> . . .either way, I mean, to me it just seems like if it is not congruent with what someone values or believes or fits into their lifestyle, I mean I can write as many scripts as I want but the person, the patient is the person who has to live with it and take the medication. (Internal Medicine, Female, 0–2 years in practice)

Concerns about SDM adding time pressure to a busy consultation

Time and the specific clinical setting were identified as barriers to engaging in SDM. Even when participants supported the idea of engaging patients in SDM, many noted that lack of time can make these discussions more difficult to have.

One internist described:

> . . . [I don't think that] anyone would say well I think shared decision making is bad, it would be

> more like, well I don't know, there is this many people on the schedule, or there is somebody waiting, those kinds of issues… (Internal Medicine, Female, 0–2 years in practice)

Another mentioned:

> …there is less time for answering questions, for asking questions just because there is no time-…it's best if you are not late at all either, because that makes an irritated patient and an irritated patient doesn't want to have a discussion with you. (Internal Medicine, Female, 6–10 years in practice)

Furthermore, the lack of time can make physicians feel pressured to make a particular recommendation without engaging in SDM, as described by this clinician:

> I think a lot of times when you are strapped for time…you don't have time to discuss what the risks and benefits of the option are, and not thoroughly discuss each option available sometimes that may railroad a physician into saying, this is what you need to do, this is definitely going to be the choice, this is going to be the best option. (OB/GYN, Female, 3–5 years in practice)

Uncertainty discussing costs with patients

Most clinicians expressed concerns about discussing costs with patients and reconciling issues around cost (some of which are unknown to the clinician) with the other facts about tests or treatment options. They questioned whether it was even appropriate to discuss costs with patients during SDM. As one OB/GYN noted:

> One of the hardest things is…if we're taking a patient into the operating room for instance, I can't tell them how much it's going to cost…lack of insurance coverage is [also] a hugely challenging piece. Um and for patients who then have to balance the risks and benefits of the medical options, plus the risks and benefits of putting their financial well-being at risk…it is a huge obstacle for this kind of stuff. (OB/GYN, Male, 3–5 years in practice)

One surgeon expanded on the difficulty of knowing the cost of treatments for the patient:

> I think cost is a difficult discussion to have because it's difficult to know exactly what the costs are to the patients, to the system. I think that's something that we just don't know much about as physicians…. (Surgery, Female, 3–5 years in practice)

Several participants felt that describing costs might dominate the discussion of options and distract from the medical risks and benefits of options, including this medical oncologist:

> I think that the cost is, I mean I think it's a disadvantage for the patient because they are going to pick the cheapest even if it's not the option that has the best risk benefit ratio to them. (Medical Oncology, Female, 6–10 years in practice)

Discussion and conclusion

Discussion

Our study explored physicians' beliefs about practicing SDM communication behaviours through semi-structured, qualitative interviews with physicians in five practice areas. Although a large number of participants expressed general support for incorporating SDM into medicine and described a cultural shift towards patient engagement in decisions, many held fundamentally inconsistent beliefs about engaging in key SDM behaviours.

A core component of SDM is eliciting patient values and preferences for different treatment options. Many participants stated that they felt comfortable discussing patients' values and preferences, yet several described concerns about responding to patients who disagree with a recommendation. Some felt their expertise and clinical experience were being challenged if patients disagreed with a recommendation. This concern could imply that some physicians believe there is one best choice for a patient. However, the process of SDM can illuminate that this choice might not be the best for a patient after considering his/her values and preferences.[40] When patients disagree with a treatment recommendation, it can be the result of an inconsistency between their

preferences and physicians' perceptions of these preferences. Past research indicates that physicians' inferences about patient values and preferences are often inaccurate even amongst physicians with more clinical experience and longer patient–physician relationships.[5] Engaging a patient in a discussion of values and preferences is therefore essential to avoid a "misdiagnosis" of patient preferences.[40,41]

Participants of all levels of experience and practice areas mentioned specific characteristics of patients that discourage them from practicing SDM. Many assumed that patients with limited education, health literacy or understanding of their condition prefer a more paternalistic model of care. However, past research shows that these patient factors are not clear predictors of desire or willingness to engage in SDM.[7,8,13,14,16,42–45] Instead of pre-screening patients and determining (without asking) who might want to engage in SDM, clinicians could explore patients' decision role preferences,[46] describing clinical equipoise and providing an overview of why patients are invited to participate in decision making. Next, they could explicitly ask patients about their desired role in decision making once patients are made aware how their preferences could affect their choice.[46] This process could be explored in future projects focusing on training clinicians in SDM and implementing SDM in practice.

During SDM, clinicians and patients share information about decisions involving multiple medically appropriate treatment options.[1–3] Many physicians, however, felt that discussing uncertainty and clinical equipoise might reflect on their skill set rather than the state of the scientific evidence. This concern was stronger amongst newer physicians. Support and mentorship from senior physicians could facilitate training in SDM and comfort describing uncertainty amongst younger physicians. Senior mentors might need training in SDM skills and there are some SDM training programmes designed to support continuing professional development of practicing clinicians.[45,47] Incorporating these programmes might be just as important as emphasizing interprofessional programmes at the pre-licensure or training level, to ensure that newer physicians can model discussions after examples set by supervisors and training directors.[45,47] The use of simulation centres could be extended used to practice SDM communication in addition to other clinical skills. Such training experiences could be explored and evaluated in future research.

In addition to individual clinician and patient level factors, participants described factors of the clinical setting that affect their perceived ability to practice SDM. For example, they felt most comfortable engaging in SDM when they are less time-pressured, or when they have additional consultation rooms or computers available for patients to view decision support interventions. However, participants stated that these situations are the exception rather than the norm, and system-level challenges such as lack of time and resources make it more difficult to engage in SDM. These system-level constraints are also barriers to other clinical innovations and are not unique to SDM.[20] Increasing clinicians' motivation to practice SDM through the support and culture of hospitals, clinics and colleagues, or perhaps through external incentives could help overcome the systems level barriers.[48] Increasing patients' access to effective decision support interventions that can be used outside of the consultation could prepare patients for SDM discussions without adding time to an already time-pressured visit.[20,27]

Discussions of cost were almost universally described as difficult. Many treatment costs are unknown to clinicians given differences in insurance coverage and variation in fees that could be incurred during the course of procedures. Clinicians felt that costs were important to discuss because of the impact cost has on the patient, but, considering the number of unknowns about cost, discussion of cost should not impact the open discussion about evidence and patients' preferences. This concern over cost is more prevalent in US medical settings than abroad given the structure of health-care financing. It might be premature to suggest

that costs should always be discussed during SDM by clinicians during clinical encounters. However, given that costs are an integral parts of patients' decision-making processes, perhaps policy changes increasing transparency in health-care costs could aid the SDM discussion. More research is needed to explore when and how to incorporate costs into patients' decisions.

Our study findings should be interpreted through the lens of a qualitative study design. The qualitative approach allowed for an in-depth exploration of beliefs underlying attitudes, perceived social norms and self-efficacy for engaging in SDM behaviours that goes beyond information that could be gathered using a closed-end survey format. Participants led the discussion and shared their responses to questions about SDM. However, some limitations of this study should be considered. We interviewed a convenience sample of volunteers in one academic medical centre from five specialty areas. We chose a diversity of practice areas rather than focusing on just one area where results could have indicated a general training bias in that practice area. We selected these practice areas because of the strong guidelines suggesting that SDM is a core component of these areas[49–54] and the uncertainty inherent in many decisions associated with these practices. Second, these areas were quite varied in terms of training experiences, so consistent themes across practice areas might be attributed to overall trends and not practice-specific norms. We did not analyse differences by subspecialties in depth due to the small sample. In addition, because our sample reflects a younger cohort of physicians and some literature suggests that older individuals are less likely to engage in SDM,[19,55] our results are likely overly positive about general feeling towards SDM implementation. Finally, our study was conducted with clinicians in an academic medical centre. However, previous research in community-based primary care centres has shown similar perceived barriers to implementing SDM and the use of DESIs including the structure of the clinic, the patient population in terms of education and motivation, the work environment, staff resources and time.[56] In fact, academic medical centres tend to have more resources than community settings to implement SDM and SDM training; thus, challenges are likely greater in community settings and should be explored in additional studies. Our results could be used to guide further explorations of these questions in larger samples and practice areas. Quantitative studies could further examine these themes and examine whether factors such as age, years in practice, specialty area, practice setting or gender influence perceptions of SDM.

Conclusion

Our research suggests that physicians perceive a number of individual, cultural and system-level obstacles to engaging in SDM communication behaviours.

Practice implications

More extensive training of physicians on how to engage in discussions of clinical equipoise, uncertainty and cost and how to engage in SDM with patients across varied socioeconomic backgrounds could help increase clinicians' confidence in SDM skills. Developing methods of integrating SDM into the institutional framework of hospitals and training programmes could also increase clinicians' motivation to practice SDM and work to change the culture of medicine such that SDM behaviours are supported.

Sources of funding

This project was supported in part by Washington University School of Medicine, the Barnes-Jewish Hospital Foundation and Siteman Cancer Center.

Disclosures

Dr. Politi previously served on the U.S. Medication Adherence Advisory Board

(Merck) 2011–2013. We confirm that all personal identifiers have been removed or disguised so the persons described are not identifiable and cannot be identified through the details of the story.

Supporting Information

Additional Supporting Information may be found in the online version of this article:

Appendix S1. Physician interview guide.

References

1 Elwyn G, Frosch D, Thomson R *et al*. Shared decision making: a model for clinical practice. *Journal of General Internal Medicine*, 2012; **27**: 1361–1367.

2 Makoul G, Clayman ML. An integrative model of shared decision making in medical encounters. *Patient Education and Counseling*, 2006; **60**: 301–312.

3 Elwyn G, Frosch D, Rollnick S. Dual equipoise shared decision making: definitions for decision and behaviour support interventions. *Implementation Science*, 2009; **4**: 75.

4 Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). *Social Science & Medicine*, 1997; **44**: 681–692.

5 Benbassat J, Pilpel D, Tidhar M. Patients' preferences for participation in clinical decision making: a review of published surveys. *Behavioral Medicine*, 1998; **24**: 81–88.

6 Chewning B, Bylund CL, Shah B, Arora NK, Gueguen JA, Makoul G. Patient preferences for shared decisions: a systematic review. *Patient Education and Counseling*, 2012; **86**: 9–18.

7 Stacey D, Samant R, Bennett C. Decision making in oncology: a review of patient decision aids to support patient participation. *CA: A Cancer Journal for Clinicians*, 2008; **58**: 293–304. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18755939, accessed 26 September 2013.

8 Légaré F, Stacey D, Forest P-G. Shared decision-making in Canada: update, challenges and where next. *German Journal for Quality in Health Care*, 2007; **101**: 213–221. Available at: http://linkinghub.elsevier.com/retrieve/pii/S1431762107000772, accessed 9 October 2013.

9 Wrede-Sach J, Voigt I, Diederichs-Egidi H, Hummers-Pradier E, Dierks M-L, Junius-Walker U. Decision-making of older patients in context of the doctor–patient relationship: a typology ranging from "self-determined" to "doctor-trusting" patients. *International Journal of Family Medicine*, 2013; **2013**: Art. No.: 478498.

10 Janz NK, Wren PA, Copeland LA, Lowery JC, Goldfarb SL, Wilkins EG. Patient–physician concordance: preferences, perceptions, and factors influencing the breast cancer surgical decision. *Journal of Clinical Oncology*, 2004; **22**: 3091–3098.

11 Hawley ST, Lantz PM, Janz NK *et al*. Factors associated with patient involvement in surgical treatment decision making for breast cancer. *Patient Education and Counseling*, 2007; **65**: 387–395.

12 Coulter A. Do patients want a choice and does it work? *BMJ*, 2010; **341**: c4989.

13 Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making: a national study of public preferences. *Journal of General Internal Medicine*, 2005; **20**: 531–535.

14 Van Tol-Geerdink JJ, Stalmeier PFM, van Lin ENJT *et al*. Do prostate cancer patients want to choose their own radiation treatment? *International Journal of Radiation Oncology, Biology, Physics*, 2006; **66**: 1105–1111.

15 Rutten LJF, Arora NK, Bakos AD, Aziz N, Rowland J. Information needs and sources of information among cancer patients: a systematic review of research (1980–2003). *Patient Education and Counseling*, 2005; **57**: 250–261.

16 United States Office of the Legislative Counsel. Patient Protection and Affordable Care Act, 2010. Available at: http://docs.house.gov/energycommerce/ppacacon.pdf, accessed November 2013.

17 Zikmund-Fisher BJ, Couper MP, Singer E *et al*. The DECISIONS study: a nationwide survey of United States adults regarding 9 common medical decisions. *Medical Decision Making*, 2010; **30**: 20S–34S.

18 Frosch DL, Moulton BW, Wexler RM, Holmes-Rovner M, Volk RJ, Levin CA. Shared decision making in the United States: policy and implementation activity on multiple fronts. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen*, 2011; **105**: 305–312.

19 Légaré F, Ratté S, Gravel K, Graham ID. Barriers and facilitators to implementing shared decision-making in clinical practice: update of a systematic review of health professionals' perceptions. *Patient Education and Counseling*, 2008; **73**: 526–535.

20 Légaré F, Witteman HO. Shared decision making: examining key elements and barriers to adoption into routine clinical practice. *Health Affairs*, 2013; **32**: 276–284.

21 Charles C, Gafni A, Whelan T. Self-reported use of shared decision-making among breast cancer specialists and perceived barriers and facilitators to implementing this approach. *Health Expectations*, 2004; **7**: 338–348.

22 Holmes-Rovner M, Valade D, Orlowski C, Draus C, Nabozny-Valerio B, Keiser S. Implementing shared decision making in routine practice: barriers and opportunities. *Health Expectations*, 2000; **3**: 182–191.
23 Frosch DL, May SG, Rendle KS, Tietbohl C, Elwyn G. Authoritarian physicians and patients' fear of being labeled "difficult" among key obstacles to shared decision making. *Health Affairs*, 2012; **31**: 1030–1038.
24 Epstein RM, Peters E. Beyond information: exploring patient's preferences. *Journal of the American Medical Association*, 2009; **302**: 195–197.
25 Adams JR, Elwyn G, Legare F, Frosch DL. Communicating with physicians about medical decisions: a reluctance to disagree. *Archives of Internal Medicine*, 2012; **172**: 1184–1186.
26 Politi MC, Street RL. The importance of communication in collaborative decision making: facilitating shared mind and the management of uncertainty. *Journal of Evaluation in Clinical Practice*, 2011; **17**: 579–584.
27 Stacey D, Bennett CL, Barry MJ *et al.* Decision aids for people facing health treatment or screening decisions. *Cochrane Database of Systematic Reviews*, 2011; Issue 10, Art. No.: CD001431.
28 Elkin EB, Kim SHM, Casper ES, Kissane DW, Schrag D. Desire for information and involvement in treatment decisions: elderly cancer patients' preferences and their physicians' perceptions. *Journal of Clinical Oncology*, 2007; **25**: 5275–5280.
29 Rees CE, Bath PA. The information needs and source preferences of women with breast cancer and their family members: a review of the literature published between 1988 and 1998. *Journal of Advanced Nursing*, 2000; **31**: 833–841.
30 Venkateswaren L, Butow P, Jansen J *et al.* Decision making in older patients with advanced cancer: does doctor know best? *Medical Journal of Australia*, 2012; **196**: 35–36.
31 Fishbein M, Ajzen I. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Psychology Press, 2010.
32 Fishbein M. The role of theory in HIV prevention. *AIDS Care: Psychological and Sociomedical Aspects of AIDS/HIV*, 2000; **12**: 273–278.
33 Yzer M. The Integrative Model of Behavioral Prediction as a Tool for Designing Health Messages. In: Cho H (ed.) *Health Communication Message Design: Theory and Practice*. Thousand Oaks, CA: SAGE, 2008: 21–40.
34 Fishbein M. A theory of reasoned action: some applications and implications. *Nebraska Symposium on Motivation*, 1979; **27**: 65–116.
35 Ajzen I. From intentions to actions: a theory of planned behavior. In: Kuhl J, Beckmann J (eds) *Action Control*. Berlin, Heidelberg: Springer, 1985: 11–39.
36 Rosenstock I. Why people use health services. *Milbank Memorial Fund Quarterly*, 1966; **44**: 94–127.
37 Bandura A. Human agency in social cognitive theory. *American Psychologist*, 1989; **44**: 1175–1184.
38 Légaré F, Ratté S, Stacey D *et al.* Interventions for improving the adoption of shared decision making by healthcare professionals. *Cochrane Database of Systematic Reviews*, 2010; Issue 5, Art. No.: CD006732.
39 Strauss AC, Corbin JM. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, 1st edn. Thousand Oaks, CA: SAGE Publications, 1990.
40 Mulley AG, Trimble C, Elwyn G. Stop the silent misdiagnosis: patients' preferences matter. *BMJ*, 2012; **345**: e6572.
41 Street R Jr, Haidet P. How well do doctors know their patients? Factors affecting physician understanding of patients' health beliefs. *Journal of General Internal Medicine*, 2011; **26**: 21–27.
42 Barratt A. Evidence Based Medicine and Shared Decision Making: the challenge of getting both evidence and preferences into health care. *Patient Education and Counseling*, 2008; **73**: 407–412. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18845414, accessed 16 September 2013.
43 Barry MJ, Edgman-Levitan S. Shared decision making–pinnacle of patient-centered care. *The New England Journal of Medicine*, 2012; **366**: 780–781.
44 Elwyn G, Laitner S, Coulter A, Walker E, Watson P, Thomson R. Implementing shared decision making in the NHS. *BMJ*, 2010; **341**: 971–975.
45 Légaré F, Politi MC, Drolet R, Desroches S, Stacey D, Bekker H. Training health professionals in shared decision-making: an international environmental scan. *Patient Education and Counseling*, 2012; **88**: 159–169.
46 Politi MC, Dizon DS, Frosch DL, Kuzemchak MD, Stiggelbout AM. The importance of clarifying decision role preferences before engaging in shared decision making. *BMJ*, 2013; **347**: f7066.
47 Légaré F, Bekker H, Desroches S *et al.* Effective continuing professional development for translating shared decision making in primary care: a study protocol. *Implementation Science*, 2010; **5**: 83.
48 Politi MC, Pieterse AH, Truant T *et al.* Interprofessional education about patient decision support in specialty care. *Journal of Interprofessional Care*, 2011; **25**: 416–422.
49 U.S. Preventive Service Task Force. Asprin for primary prevention of cardiovascular events: recommendations and rationale. *Annals of Internal Medicine*, 2002; **136**: 157–169.

50 U.S. Preventive Service Task Force. Screening for Colorectal Cancer, Topic Page [Internet], 2009. Available at: http://www.uspreventiveservicestaskforce.org/uspstf/uspscolo.htm, accessed 10 October 2013.
51 U.S. Preventive Service Task Force. Screening for Prostate Cancer, Topic Page [Internet], 2012. Available at: http://www.uspreventiveservicestaskforce.org/prostatecancerscreening.htm, accessed 10 October 2013.
52 Committee on Gynecologic Practice. Committee Opinion: Well-Woman Visit [Internet], 2012. Available at: http://www.acog.org/Resources And Publications/Committee Opinions/Committee on Gynecologic Practice/Well-Woman Visit.aspx, accessed October 2013.
53 Elwyn G, Caldon L, Rosenkranz K *et al.* Breast cancer surgery: Option Grid [Internet], 2012. Available at: http://www.optiongrid.org/resources/breastcancersurgery_grid_USA.pdf, accessed March 2013.
54 Durand M-A, Collins PA, Beattie B, Dropkin B, Elwyn G. Amniocentesis: Option Grid [Internet], 2013. Available at: http://www.optiongrid.org/resources/amniocentesis_grid.pdf, accessed September 2013.
55 Politi MC, Légaré F. Physicians' reactions to uncertainty in the context of shared decision making. *Patient Education and Counseling*, 2010; **80**: 155–157.
56 Frosch DL, Singer KJ, Timmermans S. Conducting implementation research in community-based primary care: a qualitative study on integrating patient decision support interventions for cancer screening into routine practice. *Health Expectations*, 2011; **14**: 73–84.